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Datasheet for ABIN3134539  
**FOXP1 Protein (AA 1-705) (Strep Tag)**

### Overview

Quantity:	1 mg
Target:	FOXP1
Protein Characteristics:	AA 1-705
Origin:	Mouse
Source:	Tobacco ( <i>Nicotiana tabacum</i> )
Protein Type:	Recombinant
Purification tag / Conjugate:	This FOXP1 protein is labelled with Strep Tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB), ELISA

### Product Details

Sequence: MMQESGSETK SNGSAIQNGS SGGNHILLECG ALRDTRSNGE APAVDLGAAD LAHVQQQQQQ  
ALQVARQLLL QQQQQQQQQQ QQQQQQQQQQ QQQQQQQQQQ QQQQQQVSG LKSPKRNDKQ  
PALQVPVSA MMTPQVITPQ QMQQILQQV LSPQQLQVLL QQQQALMLQQ QLQEFYKKQQ  
EQLQLLLQQ QHAGKQPKEQ QVATQQLAFQ QLLQMQQLQ QHLLSLQRQ GLLTIQPGQP  
ALPLQPLAQG MIPTLQQLW KEVTSHTAE ETTSSNHSSL DLTSTCVSSS APSKSSLIMN  
PHASTNGQLS VHTPKRESLS HEEHPHSHPL YGHGVCKWPG CEAVCDDFPA FLKHLNSEHA  
LDDRSTAQCR VQMQVVQLE LQLAKDKERL QAMMTHLHVK STEPKAAPQP LNLVSSVTLS  
KSASEASPQS LPHTPTTPTA PLTPVTQGPS VITTTSMHTV GPIRRRYSK YNVPISADI  
AQNQEFYKNA EVRPPFTYAS LIRQAILESP EKQLTLNEIY NWFTRMFAYF RRNAATWKNA  
VRHNLHLKHC FVRVENVKGA VWTVDEVEFQ KRRPQKISGN PSLIKNMQSS HAYCTPLNAA  
LQASMAENSI PLYTTASMGN PTLGSLASAI REELNGAMEH TNSNESDSSP GRSPMQAVHP  
IHVKEEPLDP EEAEGPLSLV TTANHSPDFD HDRDYEDPV NEDME

**Sequence without tag. The proposed Strep-Tag is based on experience s with the expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.**

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### Characteristics:

#### Key Benefits:

- Made in Germany - from design to production - by highly experienced protein experts.
- Protein expressed with ALiCE® and purified by multi-step, protein-specific process to ensure correct folding and modification.
- These proteins are normally active (enzymatically functional) as our customers have reported (not tested by us and not guaranteed).
- State-of-the-art algorithm used for plasmid design (Gene synthesis).

This protein is a **made-to-order protein** and will be made for the first time for your order. Our experts in the lab will ensure that you receive a correctly folded protein.

The big advantage of ordering our **made-to-order proteins** in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified.

#### Expression System:

- ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from *Nicotiana tabacum* c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications.
- During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!

#### Concentration:

- The concentration of our recombinant proteins is measured using the absorbance at 280nm.
- The protein's absorbance will be measured in several dilutions and is measured against its specific reference buffer.
- We use the Expasy's protparam tool to determine the absorption coefficient of each protein.

### Purification:

Two step purification of proteins expressed in Almost Living Cell-Free Expression System (ALiCE®):

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## Product Details

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1. In a first purification step, the protein is purified from the cleared cell lysate using StrepTag capture material. Eluate fractions are analyzed by SDS-PAGE.
2. Protein containing fractions of the best purification are subjected to second purification step through size exclusion chromatography. Eluate fractions are analyzed by SDS-PAGE and Western blot.

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Purity:  $\geq 80\%$  as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.

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Endotoxin Level: Low Endotoxin less than 1 EU/mg (< 0.1 ng/mg)

## Target Details

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Target: FOXP1

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Alternative Name: Foxp1 ([FOXP1 Products](#))

Background: Forkhead box protein P1 (Forkhead-related transcription factor 1),FUNCTION: Transcriptional repressor. Can act with CTBP1 to synergistically repress transcription but CTPBP1 is not essential (PubMed:11358962, PubMed:14701752). Plays an important role in the specification and differentiation of lung epithelium. Acts cooperatively with FOXP4 to regulate lung secretory epithelial cell fate and regeneration by restricting the goblet cell lineage program, the function may involve regulation of AGR2 (PubMed:11358962, PubMed:22675208). Essential transcriptional regulator of B-cell development (PubMed:16819554). Involved in regulation of cardiac muscle cell proliferation (PubMed:20713518). Involved in the columnar organization of spinal motor neurons. Promotes the formation of the lateral motor neuron column (LMC) and the preganglionic motor column (PGC) and is required for respective appropriate motor axon projections. The segment-appropriate generation of spinal cord motor columns requires cooperation with other Hox proteins (PubMed:18667151, PubMed:18662545). Can regulate PITX3 promoter activity, may promote midbrain identity in embryonic stem cell-derived dopamine neurons by regulating PITX3 (PubMed:20175877). Negatively regulates the differentiation of T follicular helper cells T(FH)s (PubMed:24859450). Involved in maintenance of hair follicle stem cell quiescence, the function probably involves regulation of FGF18 (PubMed:23946441). Represses transcription of various pro-apoptotic genes and cooperates with NF-kappa B-signaling in promoting B-cell expansion by inhibition of caspase-dependent apoptosis. Binds to CSF1R promoter elements and is involved in regulation of monocyte differentiation and macrophage functions, repression of CSF1R in monocytes seems to involve NCOR2 as corepressor. Involved in endothelial cell proliferation, tube formation and migration indicative for a role in angiogenesis, the role in neovascularization seems to implicate suppression of SEMA5B. Can negatively regulate androgen receptor signaling (By similarity).

## Target Details

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Acts as a transcriptional activator of the FBXL7 promoter, this activity is regulated by AURKA (By similarity). {ECO:0000250|UniProtKB:Q9H334, ECO:0000269|PubMed:14701752, ECO:0000269|PubMed:16819554, ECO:0000269|PubMed:18662545, ECO:0000269|PubMed:18667151, ECO:0000269|PubMed:20175877, ECO:0000269|PubMed:20713518, ECO:0000269|PubMed:22675208, ECO:0000269|PubMed:23946441, ECO:0000269|PubMed:24859450, ECO:0000305|PubMed:20175877, ECO:0000305|PubMed:22675208, ECO:0000305|PubMed:23946441}., FUNCTION: [Isoform 5]: Involved in transcriptional regulation in embryonic stem cells (ESCs). Stimulates expression of transcription factors that are required for pluripotency and decreases expression of differentiation-associated genes. Has distinct DNA-binding specificities as compared to the canonical form and preferentially binds DNA with the sequence 5'-CGATACAA-3' (or closely related sequences) (By similarity). Promotes ESC self-renewal and pluripotency (PubMed:21924763). {ECO:0000250|UniProtKB:Q9H334, ECO:0000269|PubMed:21924763}.

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Molecular Weight: 78.8 kDa

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UniProt: [P58462](#)

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Pathways: [Chromatin Binding](#), [Regulation of Muscle Cell Differentiation](#), [Positive Regulation of Immune Effector Process](#), [Production of Molecular Mediator of Immune Response](#)

## Application Details

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Application Notes: In addition to the applications listed above we expect the protein to work for functional studies as well. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.

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Restrictions: For Research Use only

## Handling

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Format:	Liquid
Buffer:	The buffer composition is at the discretion of the manufacturer. If you have a special request, please contact us.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	Unlimited (if stored properly)